



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,673	11/30/2001	Jun Arakawa	Q66562	4184
7590	10/05/2005		EXAMINER	
SUGHRUE MION, PLLC 2100 Pennsylvania Avenue, NW Washington, DC 20037-3213			HANG, VU B	
			ART UNIT	PAPER NUMBER
			2622	

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/996,673	ARAKAWA ET AL.
	Examiner	Art Unit
	Vu B. Hang	2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 30 November 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-19 and 23-31 is/are rejected.
- 7) Claim(s) 20-22 and 31 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 November 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 11/67/63
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman et al. (US Patent 5,436,108) in view of Gagliardo et al. (US Patent 6,071,021).

Regarding **Claims 1, 7 and 15**, Freedman discloses an image forming method wherein an image is formed on a photosensitive material (see Col.2, Line 28-30 and Col.3, Line 39-41) containing photosensitive silver halide (see Col.2, Line 4-6) and an organic silver salt (see Col.3, Line 33-34), and consists a step of heating the photosensitive material to form the image (see Col.3, Line 39-41). Freedman, however, fails to expressly disclose performing an image read-out on the photosensitive material to obtain an image signal and performing image processing on the obtained image signal. Gagliardo discloses a method of performing a read-out on a developed photosensitive film containing an image (see Col.3, Line 1-5) and performing predetermined image processing on the image signal obtained from the read-out process (see Col.3, Line 11-13).

Freedman and Gagliardo are combinable because they are from the same field of endeavor, namely photosensitive image recording apparatuses. At the time of the invention, it would have been obvious for one skilled in the art to include a read-out

procedure on a developed photosensitive film material containing an image for the benefit of converting the image into digital format. Converting the image into digital form allows for image processing to obtain a reproduced image with the desired image quality or viewing form (i.e. image resizing), along with preserving the image quality of the original image since the image quality for images on photosensitive materials is known to deteriorate through time. Images in digital formats would also allow for multiple access of the image in a network environment.

Regarding **Claims 2 and 8**, Freedman further discloses the heating of the photosensitive material is performed at a temperature ranging from 100 to 200 degrees (see Col.14, Line 32-34) but fails to disclose perform heating for a period ranging from 5 to 60 seconds.

At the time of the invention, it would have been obvious for one skilled in the art to have information concerning the temperature and the amount of time needed for heating the photosensitive material to form an image. Since the materials needed for the photosensitive film and the heating procedures are known the art, it is just a matter of trial and error for one to determine the correct amount of time needed for heating the photosensitive material to form the image.

Regarding **Claims 3 and 9**, Freedman further discloses a heat-developable photosensitive photographic material (see Col.3, Line 66-67), comprising: a support (see Col.4, Line 1-2), and at least three kinds of photosensitive layers (see Col.4, Line 1-2 and Col.11, Line 47-49) containing silver salt grains, a binder, and a color-

developing agent (see Col.4, Line 1-6), and a color image of at least three colors formed on the material (see Col.13, Line 60-64).

Regarding **Claims 4 and 10**, Freedman discloses a photosensitive material containing silver halide (see Col.2, Line 13-19) but fails to disclose the specific amount of silver halide contained in the photosensitive material.

At the time of the invention, it would have been obvious for one skilled in the art to have information concerning the amount of silver halide used on the photosensitive material. Since it is known in the art that a typical photosensitive film where images can be developed through heating contains silver halide, it is just a matter of trial and error to determine the correct amount needed to meet the objectives of the invention.

Regarding **Claims 5 and 11**, Freedman further discloses the organic silver salt is a salt of a compound containing an imino group (see Col.4, Line 47-49).

Regarding **Claims 6 and 12**, Freedman further discloses the organic silver salt is a salt of a derivative of benzotriazole (see Col.4, Line 47-49).

Claims 13-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman et al. (US Patent 5,436,108) in view of Gagliardo et al. (US Patent 6,071,021), and in further view of Ballegaard et al. (US Patent 5,459,505).

Regarding **Claims 13, 14 and 16**, Freedman and Gagliardo disclose the system as described in Claim 7 but fail to expressly disclose a pre-development or post-development temperature and moisture content adjusting means for the development processing section. Ballegaard, however, discloses a temperature and moisture content

adjusting unit for the development processing section (see Col.3, Line 64-67 and Col.4, Line 1-8).

Freedman, Gagliardo and Ballegaard are combinable because they are from the same field of endeavor, namely photosensitive image recording apparatuses. At the time of the invention it would have been obvious for one skilled in the art to include a temperature and moisture content adjusting means to the system of Claim 7, for adjusting the temperature and moisture before and after the photosensitive material is heated for image formation. The motivation for doing so would be to limit the dimensional changes of the photosensitive material along with maintaining the image quality of the image formed. It is known in the art that temperature and moisture tends to change the dimensions of the photosensitive material. This would in turn effects the image quality of the image formed on the material.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman et al. (US Patent 5,436,108) in view of Gagliardo et al. (US Patent 6,071,021), and in further view of Hirabayashi (US Patent 6,319,657).

Regarding **Claim 17**, Freedman and Gagliardo disclose the system as described in Claim 7 but fail to expressly disclose a compensation processing means for compensating for a contribution of a print-out effect. Hirabayashi, however, discloses an image enlarging or reducing treatment process for the development-processing unit (see Col.3, Line 48-52).

Freedman, Gagliardo and Hirabayashi are combinable because they are from the same field of endeavor, namely photosensitive image recording apparatuses. At the

time of the invention, it would have been obvious for one skilled in the art to include a compensation processing means to the system of Claim 7 for the benefit of maintaining the image quality during image printouts. It is known in the art that temperature and moisture conditions tend to cause dimensional changes on the photosensitive materials. The stretching or shrinking of the image and the photosensitive recording medium would affect the resulting image quality.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman et al. (US Patent 5,436,108) in view of Gagliardo et al. (US Patent 6,071,021), and in further view of Hirabayashi (US Patent 6,319,657), and in further view of Simons (US Patent 5,418,119).

Regarding **Claim 18**, Freedman, Gagliardo and Hirabayashi disclose the system as described in Claims 7, 15 and 17 above but fail to expressly disclose a reference region on the photosensitive material to which predetermined exposure quantity is given. Simons, however, discloses multiple wavelength regions on the photosensitive material in which certain color images can be formed, based on the reflection characteristics of the region (see Col.8, Line 13-36).

Freedman, Gagliardo and Hirabayashi and Simons are combinable because they are from the same field of endeavor, namely photosensitive image recording apparatuses. At the time of the invention, it is obvious for one skilled in the art to include reference regions to the photosensitive recording medium for the benefit of forming multi-color images on the medium. It is known in the art that photosensitive materials typically contain wavelength specific areas for forming certain color images. It is also

known that different color formations are dependent on the light intensities irradiated and the reflection characteristics of the material.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman et al. (US Patent 5,436,108) in view of Gagliardo et al. (US Patent 6,071,021), and in further view of Hirabayashi (US Patent 6,319,657), and in further view of Schultz (US Patent 4,053,906).

Regarding **Claim 19**, Freedman, Gagliardo and Hirabayashi disclose the system as described in Claims 7, 15 and 17 above but fail to expressly disclose a light quantity storage means for storing information representing cumulative light quantity of reading light irradiated to the photosensitive material. Schultz, however, discloses a memory for storing pre-selected information relating to the light quantity used for scanning an image from a photosensitive material.

Freedman, Gagliardo and Hirabayashi and Schultz are combinable because they are from the same field of endeavor, namely photosensitive image recording apparatuses. At the time of the invention, it is obvious for one skilled in the art to include a storage means for storing light quantity information to the image forming system. The motivation for doing so would be to allow the system to irradiate the correct amount of light intensities during image scanning or read-out. This would also allow the system operator to select the desired intensity for the read-out process. The light quantity or intensity information would be useful for the color detection of the images formed on the photosensitive recording medium.

Claims 23-24 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman et al. (US Patent 5,436,108) in view of Gagliardo et al. (US Patent 6,071,021), and in further view of Sasano et al. (US Patent 6,198,837 B1).

Regarding **Claim 23**, Freedman and Gagliardo disclose the system as described in Claim 7 but fail to expressly disclose an identification code appending means for the photosensitive developed film, an image identification code for the image data and a storage means for storing a plurality of digital image data. Sasano, however, discloses an identification code appending means for the photosensitive developed film (see Fig.1 and Col.4, Line 30-36), an image identification code for the image data (see Fig.1 and Col.1, Line 60-65) and a storage means for storing a plurality of digital image data (see Fig.11 (18) and Col.2, Line 41-45).

Freedman, Gagliardo and Sasano are combinable because they are from the same field of endeavor, namely photosensitive image recording apparatuses. At the time of the invention it would have been obvious for one skilled in the art to include an identification code appending means, an image identification code and a storage means to the system of Claim 7. The motivation for doing so would be to store multiple image data on the system and identifying the image data stored.

Regarding **Claim 24**, Sasano further discloses an image-retrieving means for retrieving each digital image data (see Fig.11 (18) and Col.16, Line 49-55).

Since Sasano discloses identification codes for the images and a database for storing a plurality of digital image data for the system, it is obvious for one skilled in the

art to include an image-retrieving mean for the system. A system with a data storage device would likely have a data-retrieving method to select and retrieve the stored data.

Regarding **Claims 25-28**, Freedman and Gagliardo disclose the system as described in Claim 7 but fail to expressly disclose a patch on the photosensitive material where images having predetermined densities can be formed, specific layout or locations for the patch and a development judging means for measuring the density of the image having been formed on the photosensitive material. Sasano, however, discloses a patch on the photosensitive material where images can be formed (see Fig.1 (2) and Col.4, Line 30-34) and a development judging means for measuring or detecting the image density (see Col.5, Line 14-20 and Col.12, Line 6-39).

At the time of the invention, it would have been obvious for one skilled in the art to include a patch where images with predetermined density can be formed and an image density detecting or measuring means to the system of Claim 7. The motivation for doing so would be to include an identification tag or label to the developed photosensitive images, and to have the image read-out process be able to detect the images or identification information from the patch. The patch and image density detecting or measuring means would benefit a system that develops and stores photosensitive images and digital image data. The patch would identify the individual images and the image density detecting or measuring means would detect the identification information for digital conversions. It is also obvious for one skilled in the art to determine the specific locations for the patch on the photosensitive material, along with altering the size or shape to meet the desired layout criteria.

Claims 29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman et al. (US Patent 5,436,108) in view of Gagliardo et al. (US Patent 6,071,021), and in further view of Simons (US Patent 5,418,119).

Regarding **Claim 29**, Freedman and Gagliardo disclose the system as described in Claim 7 but fail to expressly disclose a magnetic recording layer on the photosensitive material and a magnetic recording information reading means. Simons, however, discloses a magnetic recording layer on a photosensitive recording medium for which information can be recorded magnetically (see Col.4, Line 37-41) and a magnetic recording information reading means (see Col.4, Line 52-56).

Freedman, Gagliardo and Simons are combinable because they are from the same field of endeavor, namely photosensitive image recording apparatuses. At the time of the invention, it would have been obvious for one skilled in the art to include a magnetic recording layer and a magnetic information reading means to the system of Claim 7. The motivation for doing so would be to provide the system with the capability to record image information on the photosensitive recording medium while also providing the system the capability to digitized the information through scanning.

Regarding **Claim 31**, Freedman and Gagliardo disclose the system as described in Claims 7 and 29 but fail to expressly disclose information representing read-out conditions of the read-out means being recorded on the magnetic recording layer and the system executing the read-out process based on the read-out conditions read by the magnetic information recording means. Gagliardo further discloses a CPU in the system (see Fig.6 (55) and Col.5, Line 43-46). Simons, however, discloses multiple wavelength

regions on the photosensitive material in which certain color images can be formed, based on the reflection characteristics of the region (see Col.8, Line 13-36).

Freedman, Gagliardo and Simons are combinable because they are from the same field of endeavor, namely photosensitive image recording apparatuses. At the time of the invention, it would have been obvious for one skilled in the art to include in the system the recording of the read-out conditions information on the magnetic recording layer of the photosensitive material and have the system CPU execute the read-out process based on the recorded read-out information. The motivation for doing so would be to provide the system with predetermined instructions for the read-out process. This would eliminate mistakes by the system operator when inputting the instructions or read-out conditions manually and allows for a more efficient process when performing the image -readout.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman et al. (US Patent 5,436,108) in view of Gagliardo et al. (US Patent 6,071,021), and in further view of Poujavid (US Patent 5,883,985).

Regarding **Claim 30**, Freedman and Gagliardo disclose the system as described in Claims 7 and 15 but fail to expressly disclose a printing unit for printing the resulting digital image data. Pourjavid, however, discloses a printing unit for printing digital medical images data (see Fig. 1 (28) and Col.4, Line 14-16).

Freedman, Gagliardo and Pourjavid are combinable because they are from the same field of endeavor, namely photosensitive image recording apparatuses. At the time of the invention, it would have been obvious for one skilled in the art to include a

printing unit to the system of Claim 1. A system that produces digital images would typically include a printing unit for outputting hard copies of the images.

Claim Objections

Claim 31 is objected to because of the following informalities: Claim 31 refers to Claim 30 having information recorded on the magnetic recording layer of the photosensitive material. Claim 30 discloses a printing means unit within the system for outputting a print in accordance to an image signal. Therefore, Claim 31 should not be dependent on Claim 30. Appropriate correction is required.

Allowable Subject Matter

Claims 20-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for indication for the allowable subject matter: For example, the limitations as recited in Claim 20, wherein the system comprises a read-out conditions setting means capable of selecting spatial resolving power and an image density resolving power, with which the image is to be read out, respectively from the a plurality of spatial resolving powers and a plurality of image density resolving powers, and setting the selected spatial resolving power and the selected image density resolving power for the image read-out; the image read-out means performs the image read-out with the spatial resolving power and the image

density resolving power, which have been set by the read-out conditions setting means; the system still further comprises an image processing condition setting means capable of selecting the image processing conditions, under which the image processing is to be performed on the image signal having been obtained from the image read-out performed by the image read-out means with the spatial resolving power and the image density resolving power having been set by the read-out conditions setting means, and setting the selected image processing conditions for the image processing; and the image processing means for performing the image processing on the image signal and under the image processing conditions setting means.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vu B. Hang whose telephone number is (571)272-0582. The examiner can normally be reached on Monday-Friday, 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (571)272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vu Hang
Assistant Examiner



JOSEPH R. POKORNÝ
PRIMARY EXAMINER
ART UNIT 2622
Joseph R. POKORNÝ